

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An RF module, comprising:

a first waveguide for propagating electromagnetic waves in a TEM mode; and

a second waveguide connected to the first waveguide, for propagating

electromagnetic waves in another mode different from the TEM mode,

wherein the second waveguide has a region surrounded by at least two ground

electrodes stacked in a vertical direction so as to face facing each other and conductors for

bringing the at least two ground electrodes into conduction, wherein electromagnetic waves in  
said another mode propagate in the region, and a connecting window is provided in one of the  
ground electrodes,

the first waveguide extends in a stacking direction of the ground electrodes, an end of the first waveguide is directly conductively connected to one of the ground electrodes of the second waveguide having the connecting window around the connecting window from  
an upper side or a lower side of the stacking direction side, and

magnetic fields of the first and second waveguides are coupled in an H plane of the second waveguide so that the direction of the magnetic field of electromagnetic waves propagated in the first waveguide and that the direction of the magnetic field of  
electromagnetic waves propagated in the second waveguide match with each other.

2. (Original) An RF module according to claim 1, wherein the second waveguide is to propagate electromagnetic waves in a TE mode.

3. (Canceled)

4. (Currently Amended) An RF module according to claim 1, wherein the second waveguide as a propagation region of the electromagnetic waves has a structure

including a plurality of propagation regions for propagating electromagnetic waves in different directions and

a magnetic field from an end portion of the first waveguide is ~~coupled in a boundary portion of the plurality of propagation regions in the second waveguide directly conductively connected to a boundary portion of the plurality of propagation region of the second waveguide and~~

the first waveguide is coupled in each H plane in the plurality of propagation regions in the second waveguide.

5. (Currently Amended) An RF module according to claim 4, ~~wherein a~~ wherein the magnetic field from an end portion of the first waveguide is ~~connected in a boundary portion of the plurality of propagation regions in the second waveguide directly~~ conductively connected to a boundary portion of the plurality of propagation region of the second waveguide so that said electromagnetic waves propagated through the first waveguide propagate so as to be branched into the plurality of propagation regions in the second waveguide.

6. (Currently Amended) An RF module according to claim 1, wherein the second waveguide is to propagate the electromagnetic waves of the another mode in a multiple mode.

7-8. (Canceled)